

AMENDMENTS TO THE CLAIMS

CLAIM 1 (CURRENTLY AMENDED): A bicycle power supply apparatus comprising:
a battery unit;
a bicycle condition detecting unit that detects when a bicycle is in a selected condition that ordinarily does not require drawing current from the battery unit for powering a current drawing element; and

a voltage decreasing unit that decreases voltage of the battery unit when the bicycle condition detecting unit detects the selected condition;

wherein the voltage decreasing unit provides a signal to activate a current drawing unit in response to the detection of the selected condition so that the current drawing unit draws current from the battery unit to cause the voltage of the battery unit to decrease.

CLAIM 2 (ORIGINAL): The apparatus according to claim 1 wherein the selected condition is a stopped condition of the bicycle.

CLAIM 3 (ORIGINAL): The apparatus according to claim 2 wherein the selected condition is a stopped condition of the bicycle for a predetermined time interval.

CLAIM 4 (PREVIOUSLY PRESENTED): The apparatus according to claim 1 further comprising a voltage sensor operatively coupled to the battery unit and to the voltage decreasing unit to provide voltage information to the voltage decreasing unit.

CLAIM 5 (CURRENTLY AMENDED): The apparatus according to claim 4 wherein the voltage decreasing unit causes provides a signal to activate the current drawing unit to cause current to be drawn from the battery unit when the bicycle condition detecting unit detects the selected condition until the voltage sensor senses a predetermined voltage.

CLAIM 6 (PREVIOUSLY PRESENTED): The apparatus according to claim 1 wherein the voltage decreasing unit turns on a display powered by the battery unit to draw current from the battery unit.

CLAIM 7 (PREVIOUSLY PRESENTED): The apparatus according to claim 1 wherein the voltage decreasing unit turns on a motor driver powered by the battery unit to draw current from the battery unit.

CLAIM 8 (ORIGINAL): The apparatus according to claim 1 wherein the battery unit is structured to be charged from a power supply adapted to be mounted to the bicycle.

CLAIM 9 (ORIGINAL): The apparatus according to claim 8 wherein the battery unit is structured to be charged from an alternating current generator.

CLAIM 10 (ORIGINAL): The apparatus according to claim 8 wherein the battery unit is structured to be charged from a separate battery.

CLAIM 11 (PREVIOUSLY PRESENTED): The apparatus according to claim 8 further comprising an input switch coupled to a first battery terminal of the battery unit to communicate current from the power supply to the battery unit, wherein the current drawing unit opens the input switch when the bicycle condition detecting unit detects the selected condition.

CLAIM 12 (ORIGINAL): The apparatus according to claim 11 wherein the battery unit has a second battery terminal coupled to a ground potential.

CLAIM 13 (PREVIOUSLY PRESENTED): The apparatus according to claim 8 further comprising a current flowing device coupled to a first battery terminal of the battery unit to flow current away from the first battery terminal.

CLAIM 14 (ORIGINAL): The apparatus according to claim 13 wherein the current flowing device comprises a resistance having a first resistance terminal coupled to the first battery terminal.

CLAIM 15 (ORIGINAL): The apparatus according to claim 14 wherein the battery unit has a second battery terminal coupled to a ground potential, and wherein the resistance has a second resistance terminal coupled to the ground potential.

CLAIM 16 (ORIGINAL): The apparatus according to claim 13 wherein the current flowing device comprises a switch coupled to the first battery terminal.

CLAIM 17 (PREVIOUSLY PRESENTED): The apparatus according to claim 16 wherein the current drawing unit closes the switch when the bicycle condition detecting unit detects the selected condition.

CLAIM 18 (ORIGINAL): The apparatus according to claim 17 further comprising a resistance coupled in series with the switch.

CLAIM 19 (ORIGINAL): The apparatus according to claim 18 wherein the battery unit has a second battery terminal coupled to a ground potential, and wherein the resistance is coupled in series between the switch and the ground potential.

CLAIM 20 (ORIGINAL): The apparatus according to claim 17 further comprising an input switch coupled to the first battery terminal to communicate current from the power supply to the battery unit, wherein the current drawing unit opens the input switch when the bicycle condition detecting unit detects the selected condition.